REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-4 and 7-29 are pending in the present application. Claim 1 is amended by the present amendment. Claims 7-27 stand withdrawn in response to a prior restriction requirement.

In the outstanding Office Action, Claims 1 and 4 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,153,730 to Nagasaki et al. (herein "Nagasaki") in view of U.S. Patent No. 6,411,331 to Sansom-Wai et al. (herein "Sansom-Wai"); Claims 2 and 3 were indicated as allowable if rewritten in independent form; and Claims 28 and 29 were allowed.

Applicant thanks the Examiner for the indication of allowable subject matter, and respectfully traverses the rejection of Claim 1 under 35 U.S.C. § 103(a) as unpatentable over Nagasaki in view of Sansom-Wai.

Claim 1 is directed to an image processing circuit that includes, *inter alia*, a selector configured to receive pixel data from an image pickup device and to receive stored pixel data from a main memory. In addition, the selector is configured to output the pixel data from the image pickup as a selected pixel data, and output the stored pixel data from the main memory as the selected pixel data. The image processing circuit also includes a real time processing unit connected to the selector and configured to receive the selected pixel data. The image processing circuit is also configured to perform a general image processing of the selected pixel data by real time processing to produce processed pixel data, and to output the processed pixel data to the main memory. The main memory is configured to store the processed pixel data in image frame units as the stored pixel data.

In a non-limiting example, Applicant's Figure 1 shows an image processing circuit that includes real time processing unit 23. Real time processing unit 23 is configured to perform a general image processing of selected pixel data that includes either image pickup data (i.e., pixel data received from lens 30a, CCD 21, and analog signal processing circuit 22) or stored pixel data from main memory 29. Further, the real time processing unit 23 is configured to store the processed data in memory 29 as the stored pixel data.

Thus, the real time processing unit 23 in the present example is configured to flexibly receive image data from the image pickup device or stored pixel data from the memory and perform a general image processing, for example pixel interpolation, color transformation, or contour correction on that received data. Further, since the real time processing can be performed on previously processed and stored data or data received from an image pickup device, this arrangement advantageously allows previously processed data to be reprocessed.

Applicant respectfully submits that the combined disclosures of Nagasaki and Sansom-Wai, taken individually or in combination, do not teach or suggest each feature of Claim 1. For example, Nagasaki and Samsom-Wai do not teach or suggest a real time processing unit that can perform a general image processing on image pickup data and stored pixel data. Nagasaki describes a digital camera in which data from the image pickup is always sent directly to memory to allow a user to take many pictures in a short interval.[1] In particular, Nagasaki notes that

> *[e]very time the user takes a picture* the image-pickup means generates still-image signals, the A/D conversion means converts these signals into digital signals, and the primary recording means [e.g., memory card 34] records the digital signals.[2]

Thus, according to Nagasaki, the digital signals from the image-pickup means are recorded in

---

[1] Nagasaki at column 2, lines 25-26.
[2] Nagasaki at column 2, lines 65-68 (emphasis added).

20

memory "every time the user takes a picture" and the still-image signals are not sent from the image-pickup means to any image processing unit. Further, <u>Nagasaki</u> indicates that

> [t]he still image signals generated by the CCD 12 are converted into digital image signals through the amplifier 15. ***The digital image signals are not processed at all*** (not compressed) before they are supplied to the common bus line 18, and are then stored at high speed into the memory card 34 ***every time*** the user pushes the shutter-releasing switch. . .[3]

Thus, according to <u>Nagasaki</u>, image signals from the CCD (e.g., image pickup device) are always sent directly to memory and are not first processed.

Further, <u>Nagasaki</u> indicates that image processing is only performed on the image signals stored in the memory, when the camera enters a "non-photographing condition," to advantageously allow a user to store captured images at high speed.[4] Accordingly, <u>Nagasaki</u> not only does not describe an image processing section that receives image data from an image pickup device, <u>Nagasaki</u> teaches away from performing image processing on the image pickup data as being opposed to the goal of high speed storage of captured images. Thus, Applicant respectfully submits that <u>Nagasaki</u> does not teach or suggest a selector that is configured to "output said pixel data from the image pickup as a selected pixel data," and a real time processing unit that is configured to "perform a general image processing of the selected pixel data," as recited in Claim 1.

Applicant respectfully notes that <u>Sansom-Wai</u> is also silent regarding the claimed features absent in the disclosure of <u>Nagasaki</u>.

Accordingly, Applicant respectfully submits that independent Claim 1 and claims depending therefrom are allowable.

---

[3] <u>Nagasaki</u> at column 6, lines 16-20 (emphasis added).
[4] <u>Nagasaki</u> at column 6, lines 31-34, and 39-44.

Consequently, in light of the above discussion and in view of the present amendment,

the present application is believed to be in condition for allowance and an early and favorable

action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/03)

Gregory J. Maier
Attorney of Record
Registration No. 25,599

Zachary S. Stern
Registration No. 54,719

GJM:ZSS\dnf
I:\ATTY\ZS\6318\6318-0022-2\63180022 AMENDMENT 011806.DOC

James D. Hamilton
Registration No. 28,421